Safety Data Sheet

1. Identification

Product Name : PATROL 25-0-0
Synonyms : Liquid Nitrogen Solution
Product Use : Blend of Nitrogen Solution and Nonionic Adjuvant
Manufacturer/Supplier : Helena Chemical Company
Address : 225 Schilling Blvd. Collierville, TN 38017
General Information : 901-761-0050
Transportation Emergency Number : CHEMTREC:800-424-9300

2. Hazard Identification

Signal Word : Warning
Skin Irritation : Slightly irritating to the skin. Severity of irritation score after 14 days-0.3.
Eye Irritation : Severely irritating to the eye. Maximum irritation mean on day 21 is 0.8 - damage was reversible.
Acute Toxicity Oral : LD50 (rat) >5,000 mg/kg
Acute Toxicity Dermal : LD50 (rabbit) >5,000 mg/kg

Hazard Categories : Oral/Dermal/Inhalation Toxicity - 5/5/5; Eye irritation - 2A; Skin irritation -3

Hazard Statement : May be harmful if swallowed
May be harmful in contact with skin
Causes serious eye irritation
Causes mild skin irritation
May be harmful if inhaled

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
Proprietary blend of N-28 liquid fertilizer and nonionic surfactant.	Proprietary	100.00
Guaranteed Analysis:		
Total Nitrogen (N): 25.00%		
Ammoniacal Nitrogen:	6484-52-2	12.40
Urea Nitrogen:	57-13-6	12.60

4. First Aid Measures

Eye : Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for further treatment advice.
Inhalation : Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
Ingestion : Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a doctor. Do not give anything by mouth to an unconsicous or convulsing person.

Indication of Immediate Medical Attention and Special Treatment Needed : Perform gastric lavage and administer charcoal if large amounts are ingested. Ammonium nitrate and urea have diuretic actions. Large doses may cause nausea and vomiting. Acidosis may occur in the presence of impaired renal function.

5. Fire Fighting Measures

Extinguishing Media : Use extinguishing media for underlying cause of fire. Material itself burns with difficulty.

Specific Hazards Arising from the Chemical : In advanced fires, control efforts should be directed towards protecting from explosion.

Special Fire Fight Proc : Wear positive-pressure self-contained breathing apparatus and full protective clothing.

6. Accidental Release Measures

Personal Precautions : If limited ventilated, wear a NIOSH-approved air-purifying respirator with cartridge for ammonia gas/vapors.

Protective Equipment : Impervious gloves, splashproof goggles, impervious apron and footwear.

Emergency Procedures : Contain spill by diking to prevent contaminating water supplies, lakes, streams, ponds or drains. Keep combustibles, such as wood, paper, oil, etc., away from spilled material.

Methods and Materials for Containment and Cleanup : If uncontaminated, recover spilled liquid and reuse as product. If contaminated, absorb with inert material then collect and place in suitable containers for disposal.

7. Handling and Storage

Precautions for Safe Handling : Keep out of reach of children. Product may be corrosive to carbon steel, copper and copper alloys. Avoid welding on tanks or pipes which have contained this product until they have been thoroughly washed out with water. Residual ammonium nitrate may explode under conditions of confinement and high temperatures.

Conditions for Safe Storage : Do not store with food, feed or other material to be used or consumed by humans or animals. Store in original container only. Keep container tightly closed. Do not allow water to be introduced into the contents of this container. Do not store near heat or open flame. Do not store with oxidizing agents.

8. Exposure Controls / Personal Protection

TLV/PEL : 15 mg/m3

Appropriate Engineering Controls : Local exhaust should be sufficient.

Personal Protective Equipment : Impervious gloves, splashproof goggles, impervious apron and footwear. Use NIOSH-approved air-purifying respirator with cartridge for ammonia gas under fire conditions.

9. Physical and Chemical Properties

Odor/Appearance : Slightly hazy green liquid, slight ammonia odor.

Flash Point, ^{0}F : Not flammable

Boiling Point, ^{0}F : >216 Degrees F.

Melting Point(Freezing point), ^{0}C : <32 Degrees F.

Vapor Pressure, mm Hg @ 20 ^{0}C	: None
Vapor Density	: No data available
Solubility in Water	: Complete
Molecular Formula	: Not applicable, formulated mixture.
Density, g/mL @ 25 ^{0}C	: 1.239-1.275
Evaporation Rate(Butyl Acetate = 1)	: Not established
Octanol/Water Partition Coefficient	: No information found
pH	: 5.5-7.5
Flammable Limits (approximate volume % in air)	: Not applicable
Auto-ignition Temperature	: Not applicable
Decomposition temperature	: No information found

10. Stability and Reactivity

Reactivity	: No information found
Chemical Stability	: Stable
Hazardous Decomposition Products	: May produce ammonia and oxides of nitrogen under fire conditions.
Hazardous Polymerization	: Will not occur
Conditions to Avoid	: Avoid elevated temperatures and contamination with organic materials.
Incompatible Materials	: Avoid concentrated acids, strong bases and heat.

11. Toxicological Information

Acute Toxicity (Oral LD50)	: >5,000 mg/kg (rat)
Acute Toxicity (Dermal LD50)	: >5,000 mg/kg (rat)
Acute Toxicity Inhalation LC50	: >5.01 mg/L (rat)
Likely Routes of Exposure	: Eyes, skin, inhalation
Skin Irritation	: Slightly irritating to the skin. Severity irritation score after 14 days-0.3.
Eye Irritation	: Severely irritating to the eye. Maximum irritation mean on day 21 is 0.8 (damage was reversible).
Skin Sensitization	: Severity of sensitization response=1.10; not considered to be a skin sensitizer.
Carcinogenic	: Not listed by IARC, NTP or OSHA.
Chronic Effects	: Nitrates cause dilation of blood vessels and methemoglobin formation, which results in low blood pressure and decreased blood oxygen carrying capacity.
Other Hazards	: Those with a history of cardiovascular disease may have aggravated reactions from overexposure.

12. Ecological Information

Ecotoxicity	: No information found
Persistence and Degradability	: No information found
Bioaccumulative Potential	: No information found
Mobility in Soil	: No information found
Other Adverse Effects	: No information found

13. Disposal Considerations

Waste Disposal Method	: This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

14. Transport Information

UN Proper Shipping Name : Not regulated by DOT, IATA or IMDG.
Transport Hazard Class : None
UN Identification Number : None
Packaging Group : None
Environmental Hazards : No information found
Transport in Bulk : No information found
Special Precautions for Transportation : No information found
Freight Classification : Fertilizing Compound, (Manufactured Fertilizer), Liquid, NOIBN (NMFC Item 68140, Sub 6, Class 70)

15. Regulatory Information

National Fire Protection Association Rating :

Health: 2 Fire: 0 Reactivity: 0
Rating Level: (4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

S.A.R.A Title III Hazard Classification (Yes/No) :

Immediate(Acute) Health: Y
Delayed (Chronic) Health: N
Sudden Release of Pressure: N
Fire: N
Reactive: N

16. Other Information

Data of Preparation/Revision : 20-April-2015